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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/848,936	05/19/2004	Korkut Yegin	DP-310881	5721
7590 07/12/2005 STEFAN V. CHMIELEWSKI DELPHI TECHNOLOGIES, INC. Legal Staff Mail Code: CT10C P.O. Box 9005 Kokomo, IN 46904-9005			EXAMINER VU, JIMMY T	
			ART UNIT 2821	PAPER NUMBER

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/848,936	<b>Applicant(s)</b> YEGIN ET AL.	
	<b>Examiner</b> Jimmy T. Vu	<b>Art Unit</b> 2821	

Am

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-3, 5-7 and 9-11 is/are rejected.  
 7) ☒ Claim(s) 4 and 8 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-7 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishikawa (U.S. Patent number 5,166,693).

Regarding claim 1, Nishikawa discloses an antenna unit (10) (Fig. 1) comprising:  
a wire antenna element (10a1-10an) (Fig. 1);  
a patch antenna element (120, 122, 134) (Fig. 19), wherein nulls of a terrestrial signal polarization pattern are directed toward a passenger compartment of a vehicle to create a larger spatial region for reception of terrestrial signals that propagate toward the vehicle (Figs. 1, 15, 18 and 19, col. 7, lines 10-15, col. 15, lines 1-24).

Regarding claim 2, Nishikawa discloses the antenna unit wherein the patch antenna element includes a high dielectric substrate (120) intermediately located between a top metallization (122) and a bottom metallization (134) (Fig. 19).

Regarding claim 3, Nishikawa discloses the antenna unit wherein a feed pin (138) electrically couples the top metallization to the bottom metallization (Fig. 19).

Regarding claim 5, Nishikawa discloses the antenna unit wherein the wire antenna element is a straight-wire element soldered to the patch antenna element (Fig. 1).

Regarding claim 6, Nishikawa discloses the antenna unit wherein the wire antenna element is a helical element soldered to the patch antenna element (Fig. 1).

Regarding claim 7, Nishikawa discloses the antenna unit wherein the wire antenna element includes a cross-antenna element coupled to a stem that is soldered to the patch antenna element (Fig. 19).

Regarding claims 9-11, the method steps are necessitated by the device structure as it is disclosed by Nishikawa.

### ***Allowable Subject Matter***

3. Claims 4 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art teaches the antenna unit wherein a height and off-centering of the wire antenna element from a central area of the antenna unit directly shifts the null of the terrestrial signal polarization pattern.

**Conclusion**


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T Vu whose telephone number is (571) 272-1832. The examiner can normally be reached on M - F: 9 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2800.

Jimmy Vu

June 28, 2005

  
**WILSON LEE**  
**PRIMARY EXAMINER**